

5th Annual Nordic ARM Conference Highlights

in Södertälje, Sweden

The 5th Annual Nordic ARM Conference took place February 6-7, 2012 in Södertälje, Sweden. Association President Ronny Ervik, ØPD Solutions AS, welcomed some 80 attendees representing several countries. Ervik introduced and thanked the conference sponsors and Association directors and served as Master of Ceremonies for the event.



2012 Nordic ARM attendees tour the Nordisk Wavin Rotational Molding plant.

On the first day of the conference, there was an impressive line up of presenters on timely topics, and attendees enjoyed a first-hand tour of the rotational molding manufacturing facility of Nordisk Wavin, A/S, which was sponsored by Wavin A/S and MAUS. There was a special dinner in the evening sponsored by ICO and Matrix. On the second day of the conference, there was a special seminar presented by Dr. Paul Nugent on "Rotomolding - Doing It Right the First Time," which was sponsored by Cipax, Uponor, RotoLink and Resinex.

Sergio Zilioli, sales manager for Persico, talked about several challenging projects that have been brought to success in rotational molding. The first of these was innovative boats developed by Cipax in collaboration with Persico's Rotational and Marine divisions. "The goal for this product was to develop a wide range of capable boats at a good price," he said. He talked about a project involving the reverse engineering of a chair, which was successfully exhibited at the Milan Furniture Fair, made with a CNC mold. "Reverse engineering with CNC has made huge improvements compared to 5-10 years ago," he said. Zilioli also reported about the use of liquid nylon with the Leonardo automated rotational molding machine, which is ongoing with a company in Russia.

Walter Bonazzi of Polivinil Rotomachinery talked about energy saving improvement on rotomolding machines posing such questions as, "How much consumption of energy do I need?" Bonazzi said rotomolders are used to dealing with temperature levels and cooking times and the strategy is simple: The lower the better, reduce temperature and shorten cycle times. "The tactics are complicated: increase the temperature and reduce cycle times or save energy and extend the cycle," he said. According to Bonazzi, the real question is the cost of the process, and the lower the better. "Big burners mean big capacity and we need to have a gas meter on the machine to monitor gas usage," he said. Bonazzi told the attendees that winning machines have gas saving tools on board and big energy savings can be achieved through well-organized machine cycles.

Oliver Wandres, MAUS, talked about opportunities for the Rotomolding industry and intelligent mold performances. "Price and lead times are often the most important aspects when selecting a mold, but there are other items of importance such as quality, accuracy, user friendliness, energy efficiency, etc. We need to listen to molders as every molder works differently," he said. Wandres detailed a case study on a sophisticated mold conception for an ICON box, a 6-piece cast aluminum tool for 3-layer production (PE/Foam/PE),

including four massive through holes and a total weight of 1250 kg. "The biggest challenge was the weight of the mold," he said.

Alongkorn Kanokboriboon, senior product development manager for SCG Chemicals, presented an interesting look at the Asia Pacific rotomolding industry and its product applications. He reported that the Asia Pacific geographic area covers 51 countries including West and East Asia, Southeast Asia and Oceania, and includes 4.2 billion people. Total resin consumption for this area is 300 KTA and there are approximately 1,000 rotomolders. "Products manufactured include 70% tanks and 30% others (ice boxes, septic tanks,



Dr. Paul Nugent, MNOP, and Ronny Ervik, ØPD Solutions AS

chemicals tanks, diesel tanks, kayaks, toy and playground, furniture, decorative and agriculture, etc.)," he said. And, machines typically utilized are 80% open flame Rock n Roll and 20% closed oven. "Approximately 49% of rotomolded product in Thailand is cooler boxes and water tanks," he said.

Dr. Eng. Claudine Porcel, Ico Polymers - a division of A. Schulman, talked about innovations at ICO Polymers. She gave a history of A. Schulman Inc., which began in 1928 through the company's acquisition of ICO Polymers in 2010. Porcel covered Schulman's worldwide locations and European production sites, customer services including material grades and applications offered by the company.

Niko Päivinen, product development engineer for Uponor, talked about a project where design met with engineering at Uponor. The project took place in cooperation with the University of Art and Design, Helsinki, with a Master's thesis by Mr. Tatu Piispanen. The design drivers were: simple, smart and quality. Simple to define products that are not complex, but clear in their expression and use, easy to install, use and



Matz Svensson, Cipax



Dr. Paul Nugent, MNOP



Alongkorn Konikoriboon, SCG Chemicas



Dr. Claudine Porcel, ICO Polymers



Oliver Wandres, MAUS



Niko Päivinen, Uponor



Walvin Plant Tour



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design does not compromise engineering details.

– Niko Päiveinen

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maintain and are usually simple to manufacture. Smart to define products that are a smarter choice, employ smart, innovative solutions, designed with the user in mind and environmentally smart or sustainable. Quality to define products that look and feel reliable and professional, visually express efficiency, have attention paid to the details and include a visible brand. He covered the importance of implementing design elements without compromising the technical aspects of the product. “Fully functional products can still look good, design does not compromise engineering details. Bringing in industrial designers and design guides can be easier than one would think, you can start light and use external experts until such time as you can bring a designer in house.

Matz Svensson, Nordic ARM director, reported on Rotoplas 2011, a tradeshow dedicated to the rotational molding industry. “The show was attended by more than 300 with more than 100 of them rotomolders and there were more than 70 booths exhibited,” he said. Svensson gave some examples of what was shown at Rotoplas, which included: a new type of shuttle by Ferry Industries, a 3-arm Shuttle by STP, inner watercooling and fast heating pins for moulds by MAUS, vacuum in molds to avoid bubbles by Persico, a new X-link material CARB regulations by Matrix and new mold-on graphics by Robstar. He reported that the next ARMO

Convention will take place in Lyon September/October 2012 and the next Rotoplas will take place in 2014.

On the second day of the conference, Dr. Paul Nugent gave a seminar on “Rotomolding - Doing It Right the First Time”. Nugent covered typical problems and suits faced by rotomolders and reviewed common complaints and issues and the broader effect that such problems can cause. He presented typical reasons for disputes and gave examples. “Perhaps not all of these problems and issues can be avoided, but many of them could be if the right steps are taken at the outset,” Nugent said. Nugent also said such disputes can cause problems other than just money; they can distract you from your day-to-day business and affect your reputation and good will. They are more common than one might realize and only lawyers enjoy them. Nugent’s seminar also covered product performance requirements, good design practices, understanding materials and long-term performance, good process control, documentation, testing of materials and parts and information loops, among other pertinent topics.

Sponsors for the conference included: Rotomachinery Group, Matrix, ICO Polymers, Ultra Polymers, Wavin, MAUS, Persico, RotoPlastic Morandi, Resinex, Cipax, Uponor and Rotolink.

Stay tuned for the next Nordic Conference, which will take place in 2013 at a date and location to be announced.